



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,141	09/30/2003	Gurram Kishan	124567-1	5718
43248	7590	07/06/2005	EXAMINER	
CANTOR COLBURN LLP 55 GRIFFIN RD SOUTH BLOOMFIELD, CT 06002			JOHNSON, CHRISTINA ANN	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/675,141	KISHAN ET AL.
Examiner	Art Unit	
Christina Johnson	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 30 September 2003.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-46 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 19-44 is/are allowed.

6)  Claim(s) 1-5, 7, 10, 12-17, 45 and 46 is/are rejected.

7)  Claim(s) 6, 8, 9, 11 and 18 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/30/03.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102/103***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 45-46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamana et al.

Yamana et al. (US 3,888,826) discloses a process for preparing aromatic polycarbonates from diphenyl carbonate and bisphenol A (Abstract).

It is noted that the instant claims are directed towards a process of using a product by process, i.e. bisphenol A. In this case, the disclosed bisphenol A of Yamana et al. and the instantly claimed product appear to be essentially the same, comprised of the same components, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claims 46-46 as opposed to the product taught by the prior art, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also,

when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7, 10, and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji et al.

Tsuji et al. (US 6,331,500) discloses a molecular sieve composition which have a crystalline framework and include micropores containing one or more accessible organic moieties that are linked to the framework by a carbon-silicon bond (column 1, lines 50-60). It is taught that such a functionalized molecular sieve is produced by crystallizing a mixture which includes a source of silica and at least one organosilane (column 2, lines 65-69). A plurality of organosilanes may be used (column 4, lines 35-37). Refer also to columns 2-6 for formulae and substituent groups. The reference teaches specifically that the organosilanes may contain sulfonic acid and thiol functional groups (column 4, lines 40-55 and column 5, lines 25-40). Tsuji et al. further teaches

that the molecular sieves may include further functionalization with a metal or metal containing ion including aluminum or titanium (column 7, lines 55-65).

Suitable molecular sieves include beta zeolite, ZSM-5, and zeolite Y (refer to examples). Sources of silica include fumed silica and tetraalkyl orthosilicates (column 6, lines 15-25). It is taught that suitable structure directing agents, i.e. a template compound, may be used to form the zeolites (column 6, lines 25-62).

The difference between the reference and the claims is that the reference does not disclose the specific species or subgenus, i.e. mercapto-functionalized alkoxy silane and silyl sulfonic acid compound, claimed. However, the reference does disclose a larger genus which encompasses the species or subgenus claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have chosen any of the species or subgenus taught by the reference because one of ordinary skill would expect any of the species or subgenus taught to have the same properties and same results as the genus as a whole.

With respect to claim 7, the reference is silent as to the surface area of the functionalized zeolite. However, because the reference discloses the use of the same or similar zeolites functionalized in the same manner, it is the position of the examiner that the surface areas would necessarily be the same.

With respect to claim 3, the reference further does not disclose the ration of Si to either M1 or M2. However, one of ordinary skill would appreciate that the effectiveness of the composition as a catalyst would depend upon its relative composition and would

therefore have been motivated to optimize the relative amounts of Si, M1 and M2 in order to obtain the best results from the composition.

***Allowable Subject Matter***

6. Claims 6, 8-9, 11 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 19-44 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 6, the prior art of record does not teach or suggest a functionalized zeolite composition having the claimed structure wherein the zeolite is a mesoporous zeolite comprising MCM-41 or SBA-15. With respect to claims 8 and 9, the prior art of record does not teach or suggest a functionalized zeolite composition further comprising the required structural units, in combination with the other features instantly claimed. With respect to claims 11 and 18, the prior art of record does not teach or suggest a method of making a functionalized zeolite, wherein the alkyl metalate further comprises the claimed compounds, in combination with the other features instantly claimed. With respect to claims 19-36, the prior art of record does not teach or suggest a method of making a functionalized zeolite comprising the steps of forming a first intermediate product which is then oxidized to form a second intermediate product, in combination with the other features instantly claimed. With respect to claims 37-44, the

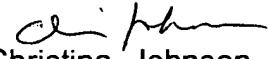
prior art of record does not teach or suggest a method of making an aromatic bisphenol using the claimed functionalized zeolite as a catalyst.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Christina Johnson  
Patent Examiner  
Art Unit 1725

6/30/05

CAJ  
June 30, 2005